

# DATA SHEET

## Three Phase Induction Motor - Squirrel Cage



Customer : Astraprom d.o.o.

Product line : IE3 Three-Phase

Product code : 12868138

Frame	: 132S	Cooling method	: IC411 - TEFC
Insulation class	: F	Mounting	: B5T
Duty cycle	: S1	Rotation <sup>1</sup>	: Both (CW and CCW)
Ambient temperature	: -20°C to +40°C	Starting method	: Direct On Line
Altitude	: 1000 m.a.s.l.	Approx. weight <sup>2</sup>	: 70.2 kg
Protection degree	: IP55	Moment of inertia (J)	: 0.0234 kgm <sup>2</sup>
Design	: N		

Output [kW]	7.5	7.5	7.5	7.5
Poles	2	2	2	2
Frequency [Hz]	50	50	50	60
Rated voltage [V]	380/660	400/690	415	460
Rated current [A]	14.4/8.29	14.1/8.17	13.9	12.4
L. R. Amperes [A]	115/66.3	120/69.5	125	117
LRC [A]	8.0	8.5	9.0	9.4
No load current [A]	4.75/2.73	5.45/3.16	6.10	5.00
Rated speed [RPM]	2915	2925	2930	3535
Slip [%]	2.83	2.50	2.33	1.81
Rated torque [kgfm]	2.51	2.50	2.49	2.07
Locked rotor torque [%]	240	280	300	310
Breakdown torque [%]	300	330	350	370
Service factor	1.00	1.00	1.00	1.00
Temperature rise	80 K	80 K	80 K	80 K
Locked rotor time	18s (cold) 10s (hot)	18s (cold) 10s (hot)	18s (cold) 10s (hot)	18s (cold) 10s (hot)
Noise level <sup>2</sup>	63.0 dB(A)	63.0 dB(A)	63.0 dB(A)	68.0 dB(A)
Efficiency (%)	25%			
	50%	89.2	88.5	87.9
	75%	90.1	89.8	89.7
	100%	90.1	90.3	90.3
Power Factor	25%			
	50%	0.73	0.68	0.63
	75%	0.83	0.80	0.76
	100%	0.88	0.85	0.83

Bearing type	: Drive end	6308 ZZ	Non drive end	6207 ZZ	Foundation loads	Max. traction	: 106 kgf
	: Sealing	Oil Seal	Lip Seal	Max. compression		: 176 kgf	
Lubrication interval	: -	-					
Lubricant amount	: -	-					
Lubricant type	: Mobil Polyrex EM						

### Notes

This revision replaces and cancel the previous one, which must be eliminated.

- (1) Looking the motor from the shaft end.
- (2) Measured at 1m and with tolerance of +3dB(A).
- (3) Approximate weight subject to changes after manufacturing process.
- (4) At 100% of full load.

These are average values based on tests with sinusoidal power supply, subject to the tolerances stipulated in IEC 60034-1.

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## Three Phase Induction Motor - Squirrel Cage

Customer : Astraprom d.o.o.

### Thermal protection

ID	Application	Type	Quantity	Sensing Temperature
1	Winding	Thermistor - 2 wires	1 x Phase	155 °C

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# TORQUE AND CURRENT VS SPEED CURVE

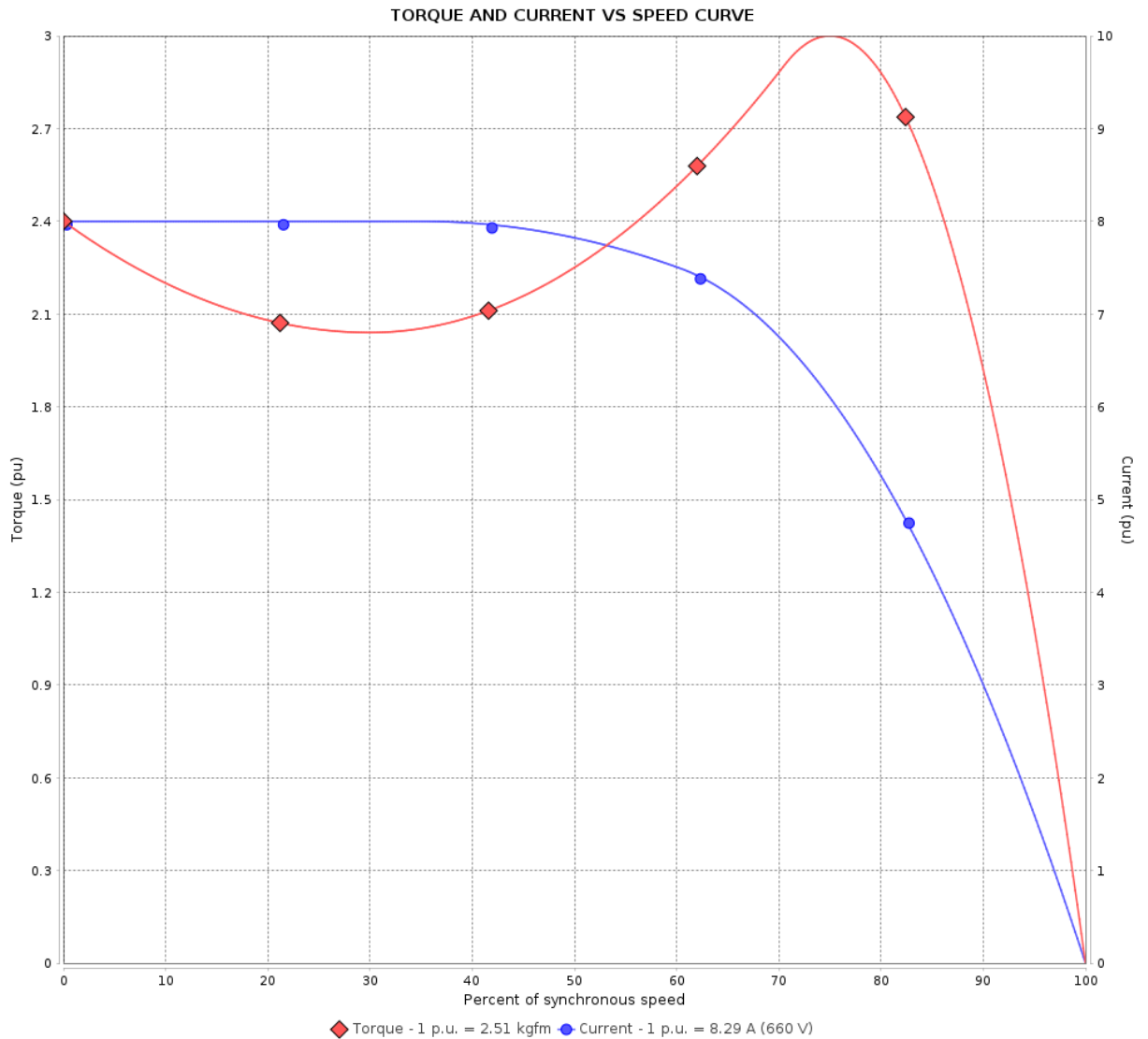


## Three Phase Induction Motor - Squirrel Cage

Customer : Astraprom d.o.o.

Product line : IE3 Three-Phase

Product code : 12868138



Performance : 380/660 V 50 Hz 2P

Rated current : 14.4/8.29 A  
 LRC : 8.0  
 Rated torque : 2.51 kgfm  
 Locked rotor torque : 240 %  
 Breakdown torque : 300 %  
 Rated speed : 2915 rpm

Moment of inertia (J) : 0.0234 kgm<sup>2</sup>  
 Duty cycle : S1  
 Insulation class : F  
 Service factor : 1.00  
 Temperature rise : 80 K  
 Design : N

Locked rotor time : 18s (cold) 10s (hot)

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# TORQUE AND CURRENT VS SPEED CURVE

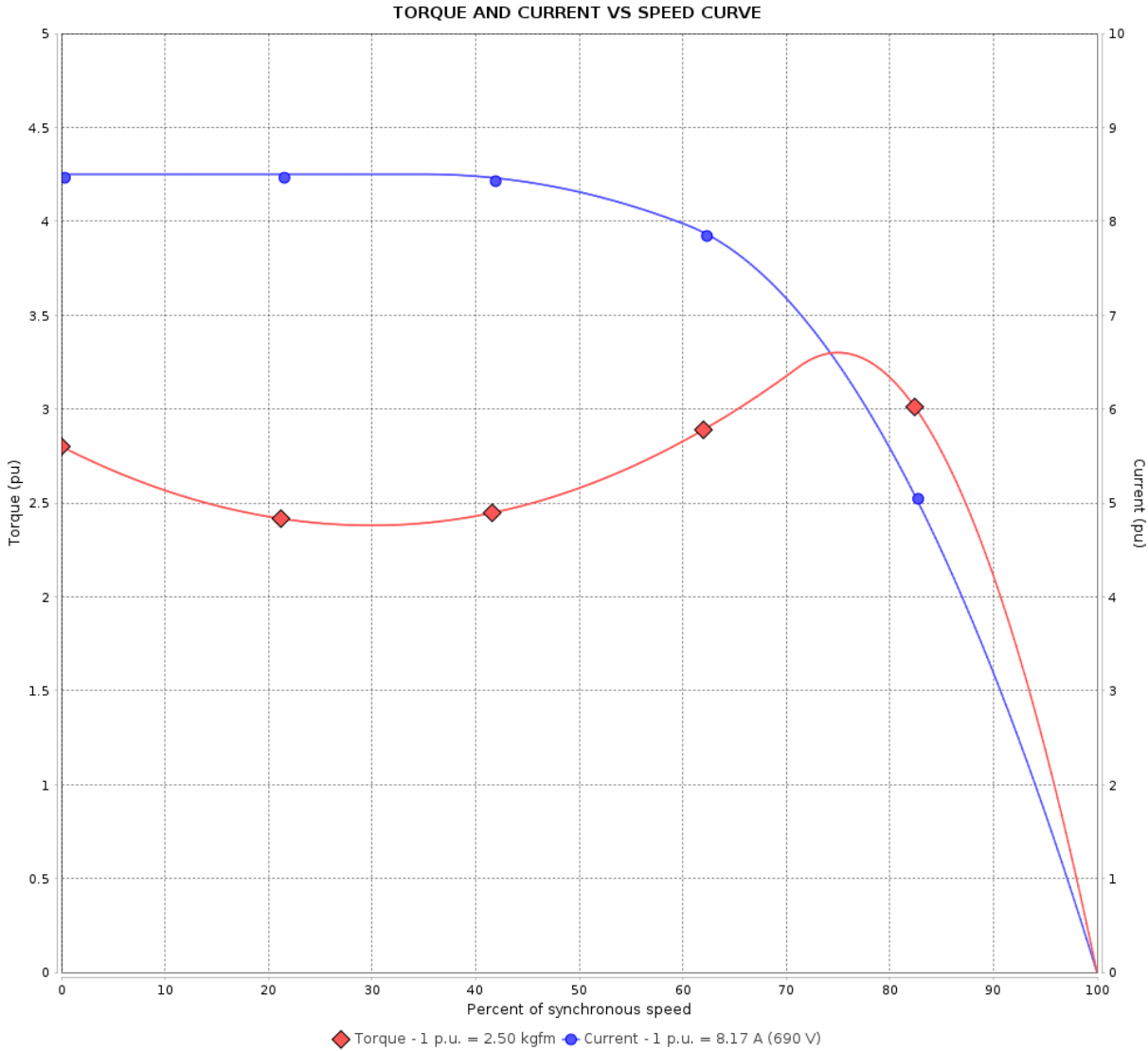
Three Phase Induction Motor - Squirrel Cage



Customer : Astraprom d.o.o.

Product line : IE3 Three-Phase

Product code : 12868138



Performance : 400/690 V 50 Hz 2P

Rated current	: 14.1/8.17 A	Moment of inertia (J)	: 0.0234 kgm <sup>2</sup>
LRC	: 8.5	Duty cycle	: S1
Rated torque	: 2.50 kgfm	Insulation class	: F
Locked rotor torque	: 280 %	Service factor	: 1.00
Breakdown torque	: 330 %	Temperature rise	: 80 K
Rated speed	: 2925 rpm	Design	: N

Locked rotor time : 18s (cold) 10s (hot)

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# TORQUE AND CURRENT VS SPEED CURVE

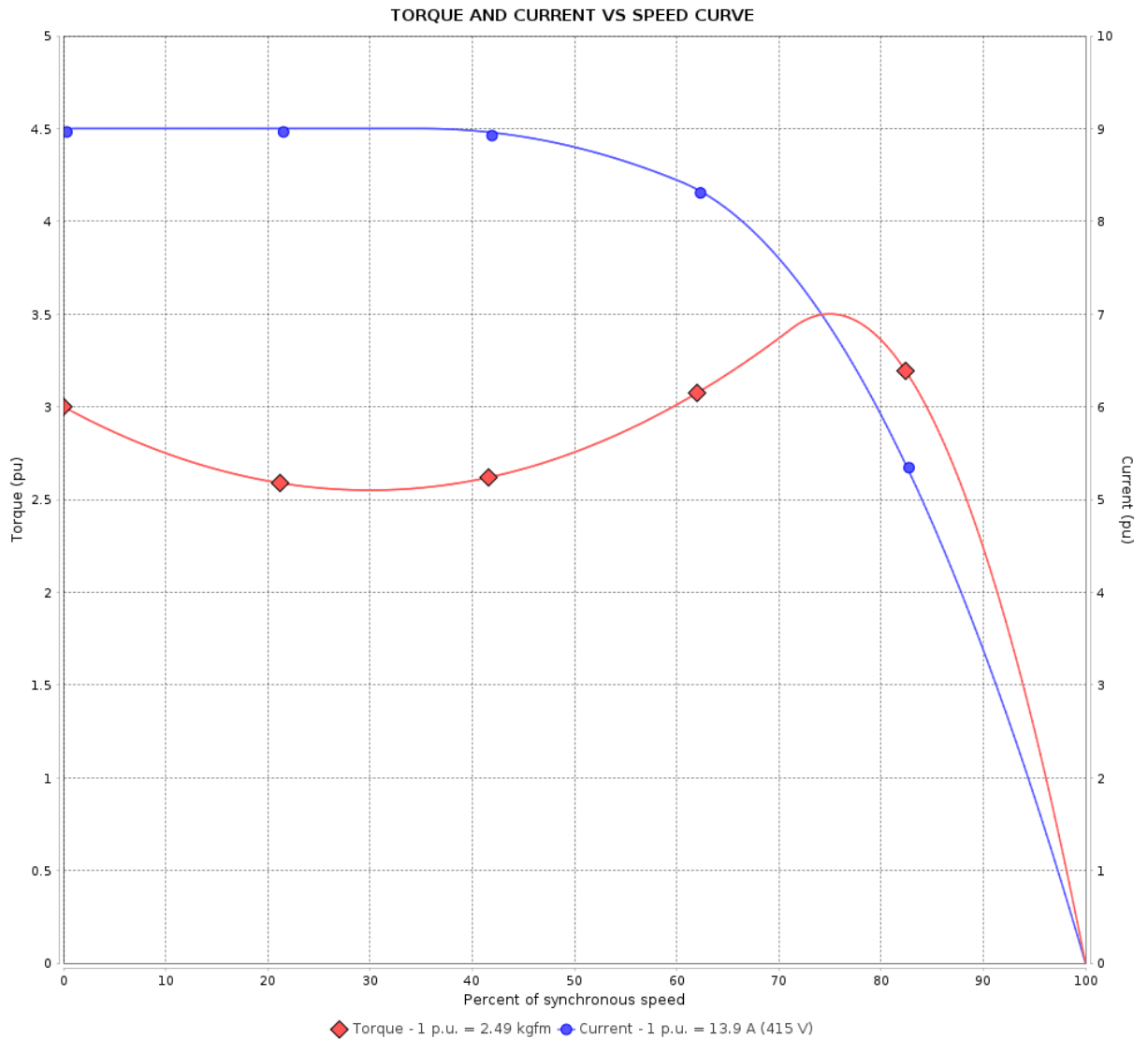


## Three Phase Induction Motor - Squirrel Cage

Customer : Astraprom d.o.o.

Product line : IE3 Three-Phase

Product code : 12868138



Performance : 415 V 50 Hz 2P

Rated current	: 13.9 A	Moment of inertia (J)	: 0.0234 kgm <sup>2</sup>
LRC	: 9.0	Duty cycle	: S1
Rated torque	: 2.49 kgfm	Insulation class	: F
Locked rotor torque	: 300 %	Service factor	: 1.00
Breakdown torque	: 350 %	Temperature rise	: 80 K
Rated speed	: 2930 rpm	Design	: N

Locked rotor time : 18s (cold) 10s (hot)

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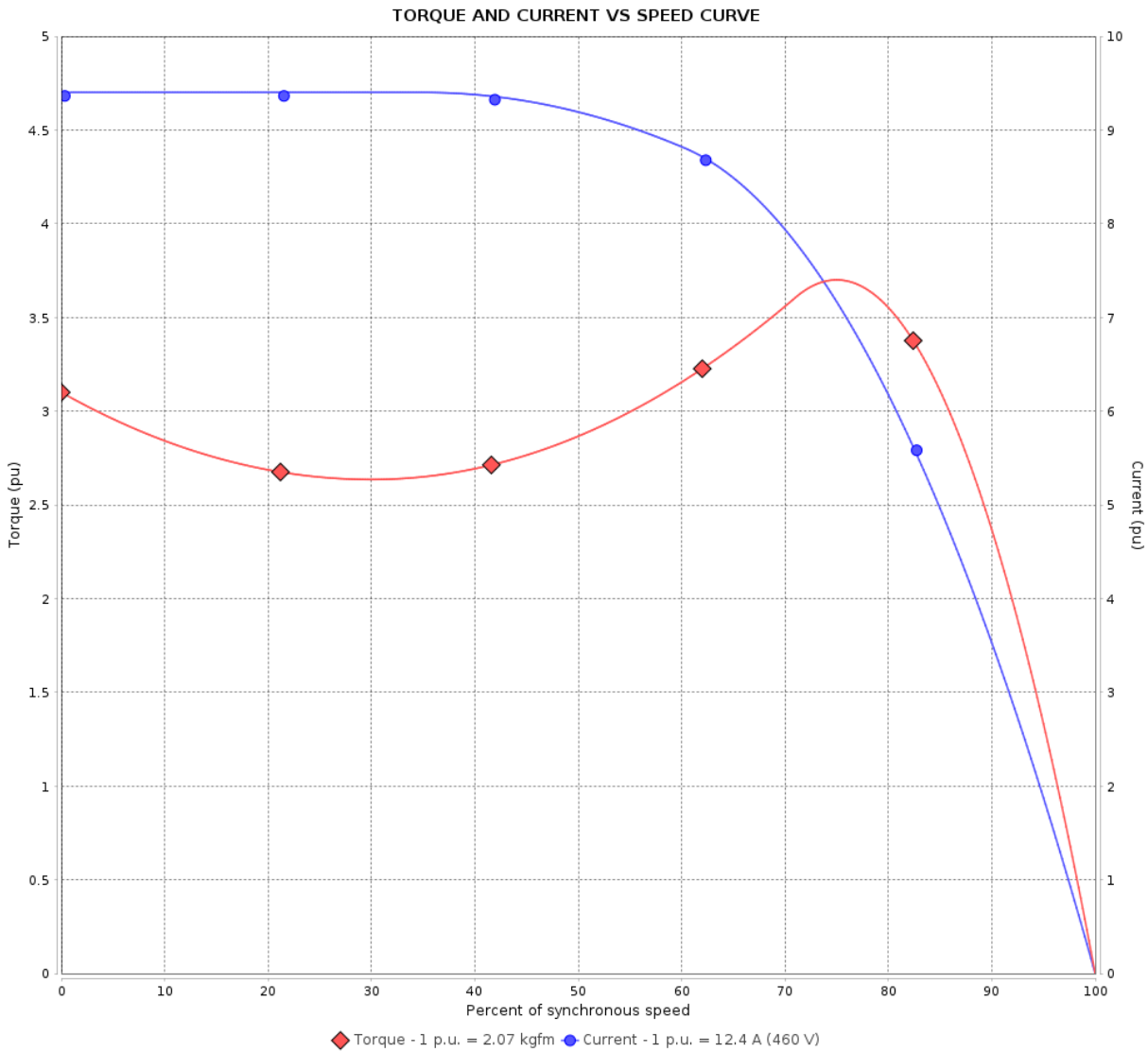
Three Phase Induction Motor - Squirrel Cage



Customer : Astraprom d.o.o.

Product line : IE3 Three-Phase

Product code : 12868138



Performance : 460 V 60 Hz 2P

Rated current	: 12.4 A	Moment of inertia (J)	: 0.0234 kgm <sup>2</sup>
LRC	: 9.4	Duty cycle	: S1
Rated torque	: 2.07 kgfm	Insulation class	: F
Locked rotor torque	: 310 %	Service factor	: 1.00
Breakdown torque	: 370 %	Temperature rise	: 80 K
Rated speed	: 3535 rpm	Design	: N

Locked rotor time : 18s (cold) 10s (hot)

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# LOAD PERFORMANCE CURVE

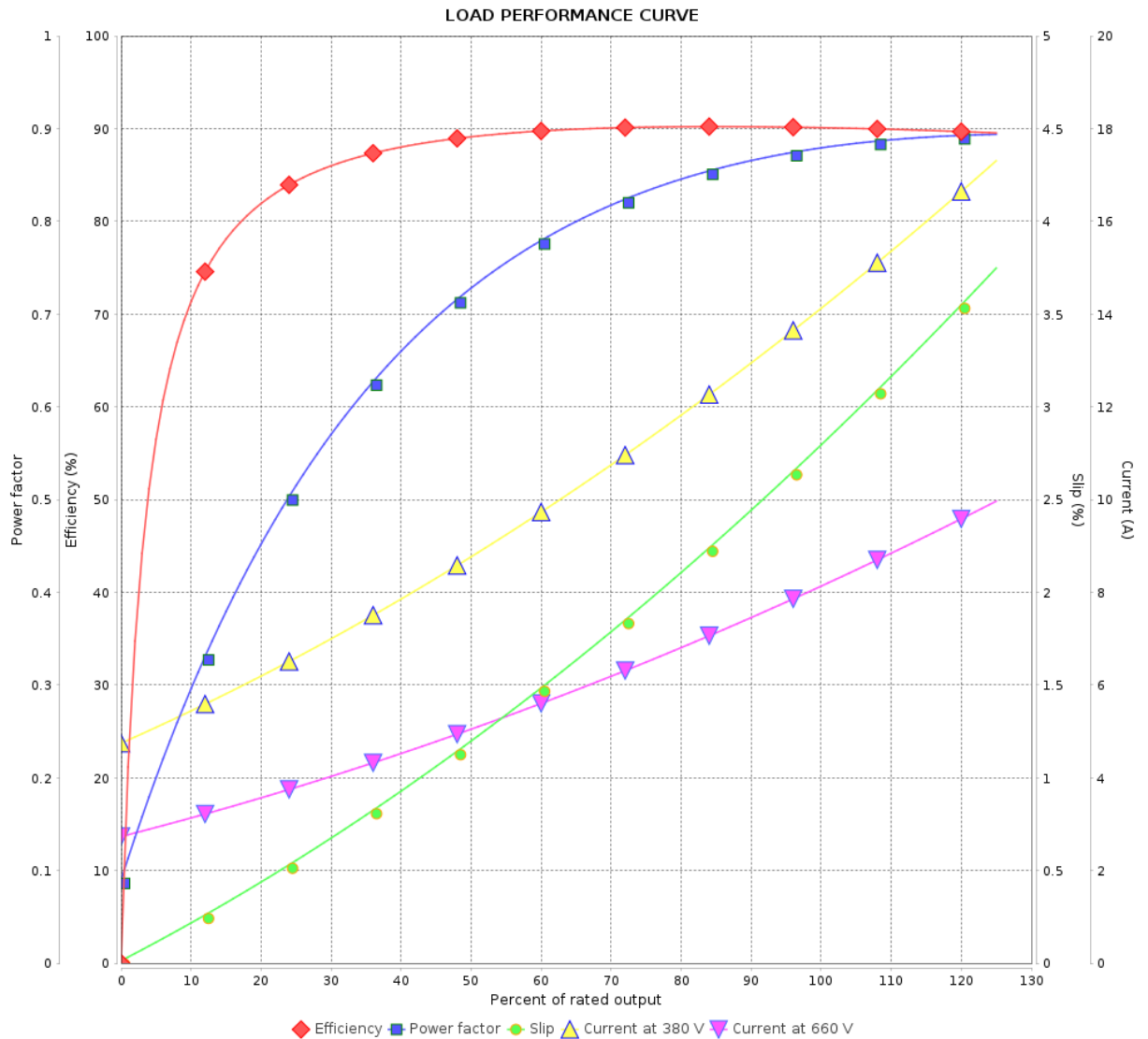
## Three Phase Induction Motor - Squirrel Cage



Customer : Astraprom d.o.o.

Product line : IE3 Three-Phase

Product code : 12868138



Performance : 380/660 V 50 Hz 2P

Rated current : 14.4/8.29 A  
 LRC : 8.0  
 Rated torque : 2.51 kgfm  
 Locked rotor torque : 240 %  
 Breakdown torque : 300 %  
 Rated speed : 2915 rpm

Moment of inertia (J) : 0.0234 kgm<sup>2</sup>  
 Duty cycle : S1  
 Insulation class : F  
 Service factor : 1.00  
 Temperature rise : 80 K  
 Design : N

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# LOAD PERFORMANCE CURVE

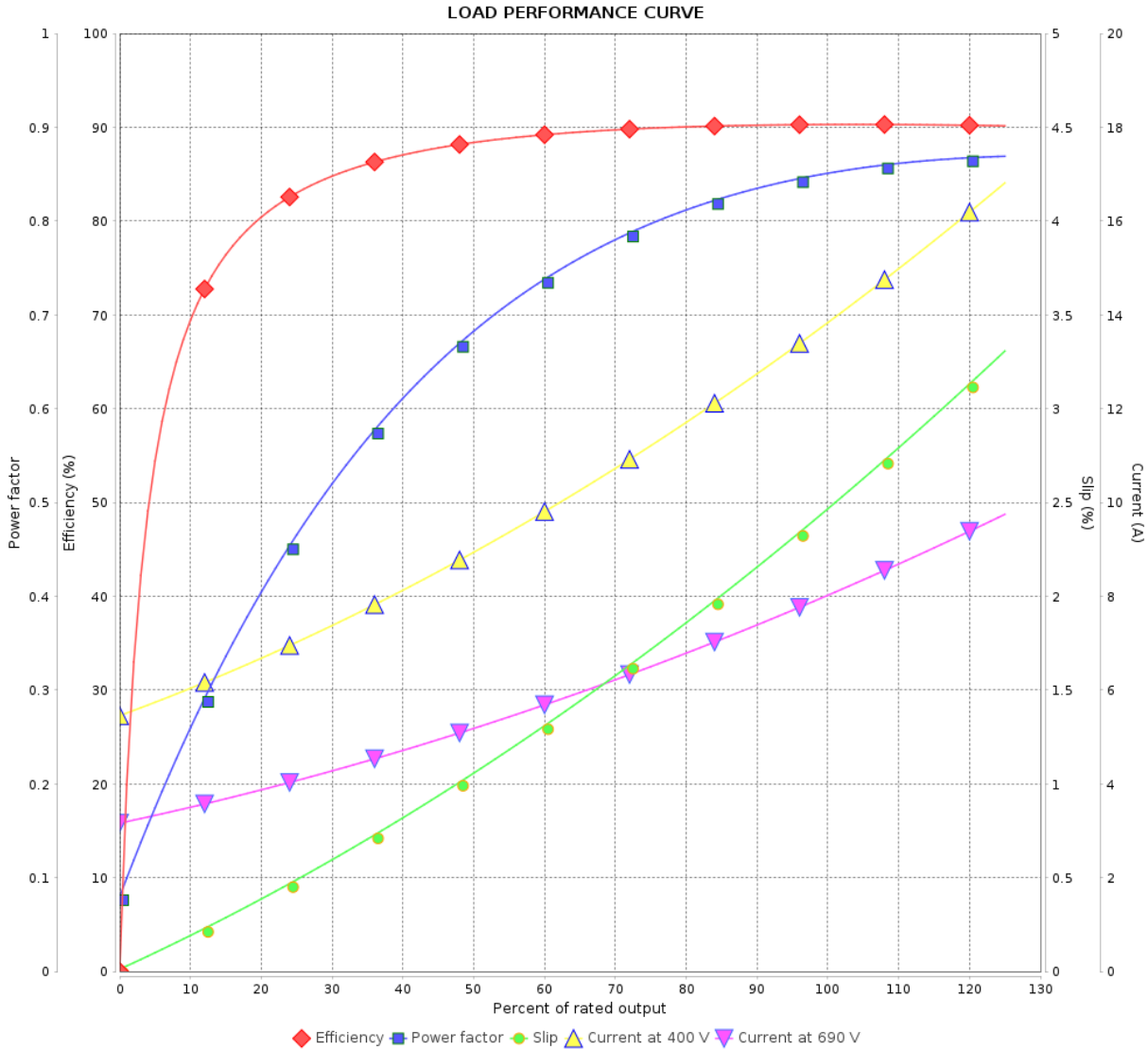
Three Phase Induction Motor - Squirrel Cage



Customer : Astraprom d.o.o.

Product line : IE3 Three-Phase

Product code : 12868138



Performance : 400/690 V 50 Hz 2P

Rated current : 14.1/8.17 A  
 LRC : 8.5  
 Rated torque : 2.50 kgfm  
 Locked rotor torque : 280 %  
 Breakdown torque : 330 %  
 Rated speed : 2925 rpm

Moment of inertia (J) : 0.0234 kgm<sup>2</sup>  
 Duty cycle : S1  
 Insulation class : F  
 Service factor : 1.00  
 Temperature rise : 80 K  
 Design : N

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# LOAD PERFORMANCE CURVE

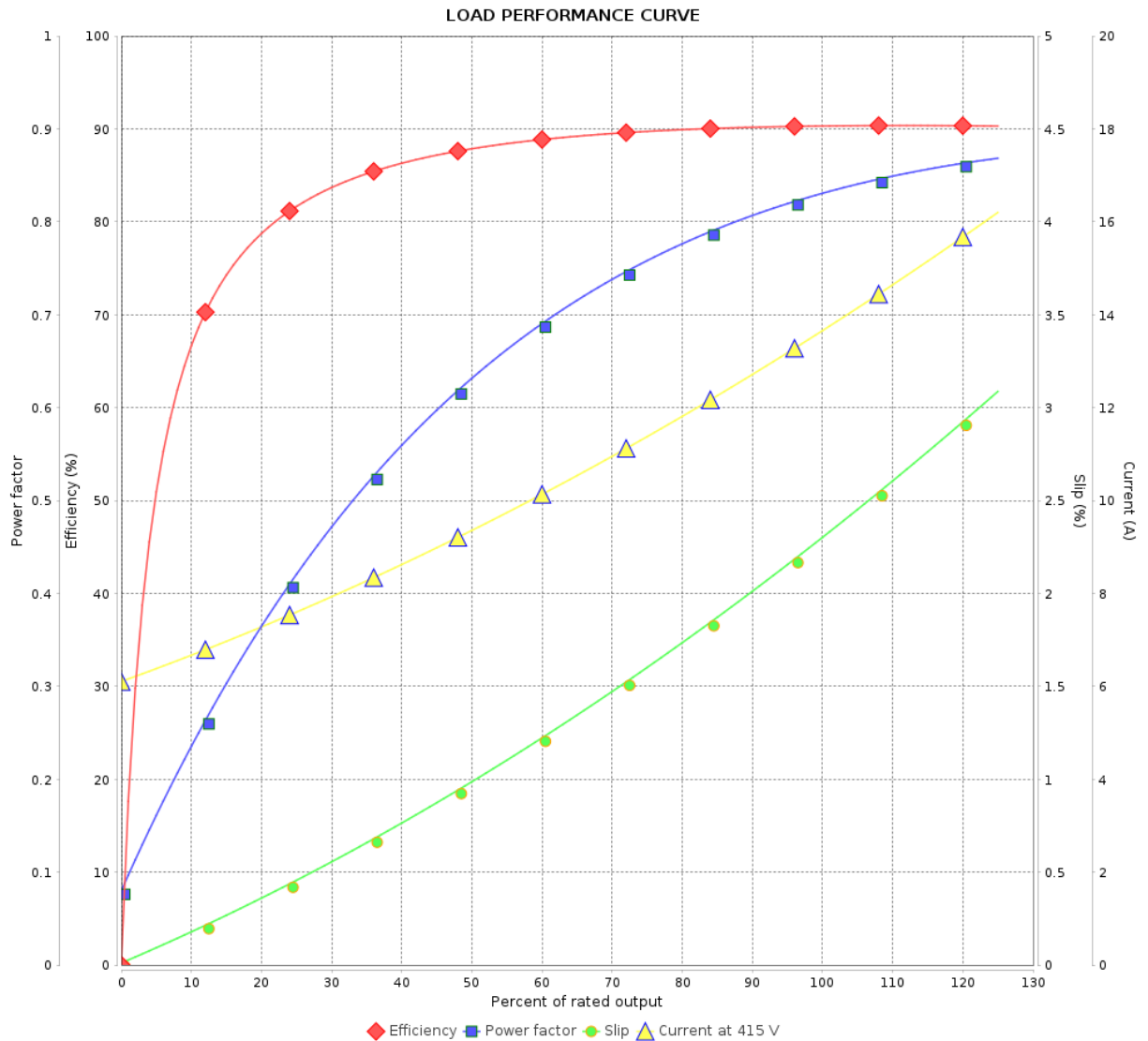
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Product code : 12868138



Performance : 415 V 50 Hz 2P

Rated current : 13.9 A  
 LRC : 9.0  
 Rated torque : 2.49 kgfm  
 Locked rotor torque : 300 %  
 Breakdown torque : 350 %  
 Rated speed : 2930 rpm

Moment of inertia (J) : 0.0234 kgm<sup>2</sup>  
 Duty cycle : S1  
 Insulation class : F  
 Service factor : 1.00  
 Temperature rise : 80 K  
 Design : N

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# LOAD PERFORMANCE CURVE

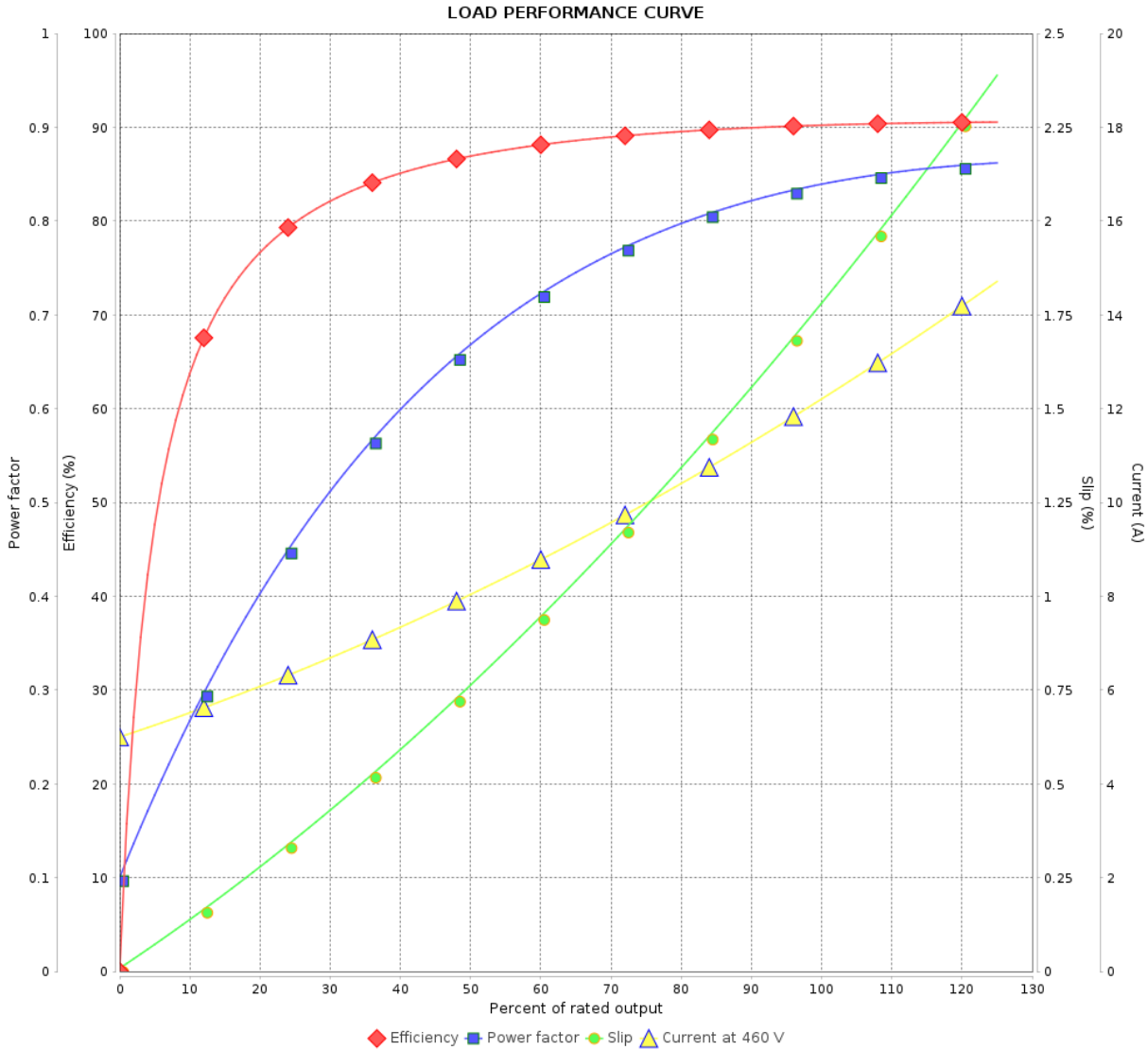
Three Phase Induction Motor - Squirrel Cage



Customer : Astraprom d.o.o.

Product line : IE3 Three-Phase

Product code : 12868138



Performance : 460 V 60 Hz 2P

Rated current	: 12.4 A	Moment of inertia (J)	: 0.0234 kgm <sup>2</sup>
LRC	: 9.4	Duty cycle	: S1
Rated torque	: 2.07 kgfm	Insulation class	: F
Locked rotor torque	: 310 %	Service factor	: 1.00
Breakdown torque	: 370 %	Temperature rise	: 80 K
Rated speed	: 3535 rpm	Design	: N

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# THERMAL LIMIT CURVE

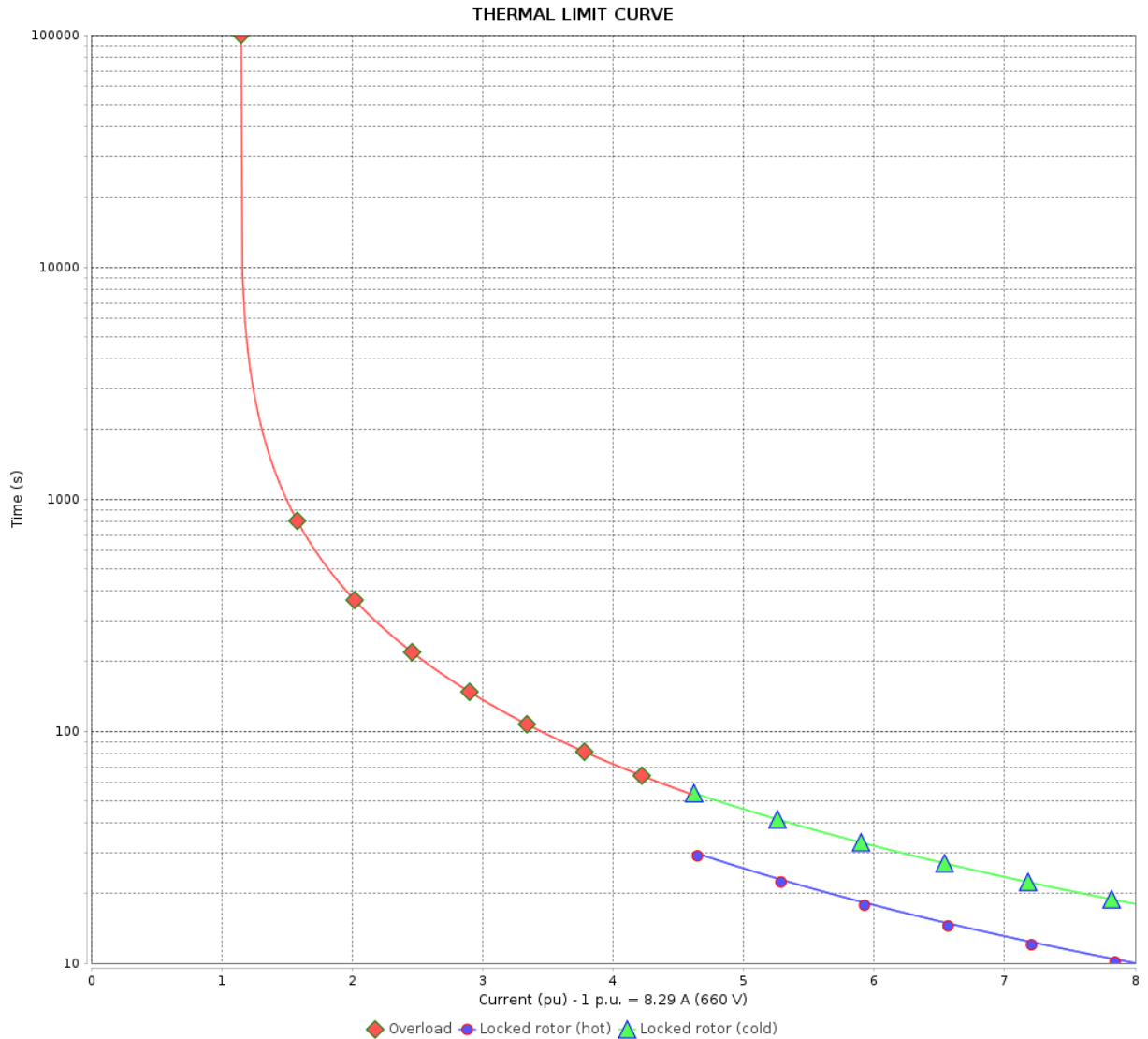
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 Locked rotor torque : 240 %  
 Breakdown torque : 300 %  
 Rated speed : 2915 rpm

Moment of inertia (J) : 0.0234 kgm<sup>2</sup>  
 Duty cycle : S1  
 Insulation class : F  
 Service factor : 1.00  
 Temperature rise : 80 K  
 Design : N

Heating constant

Cooling constant

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# THERMAL LIMIT CURVE

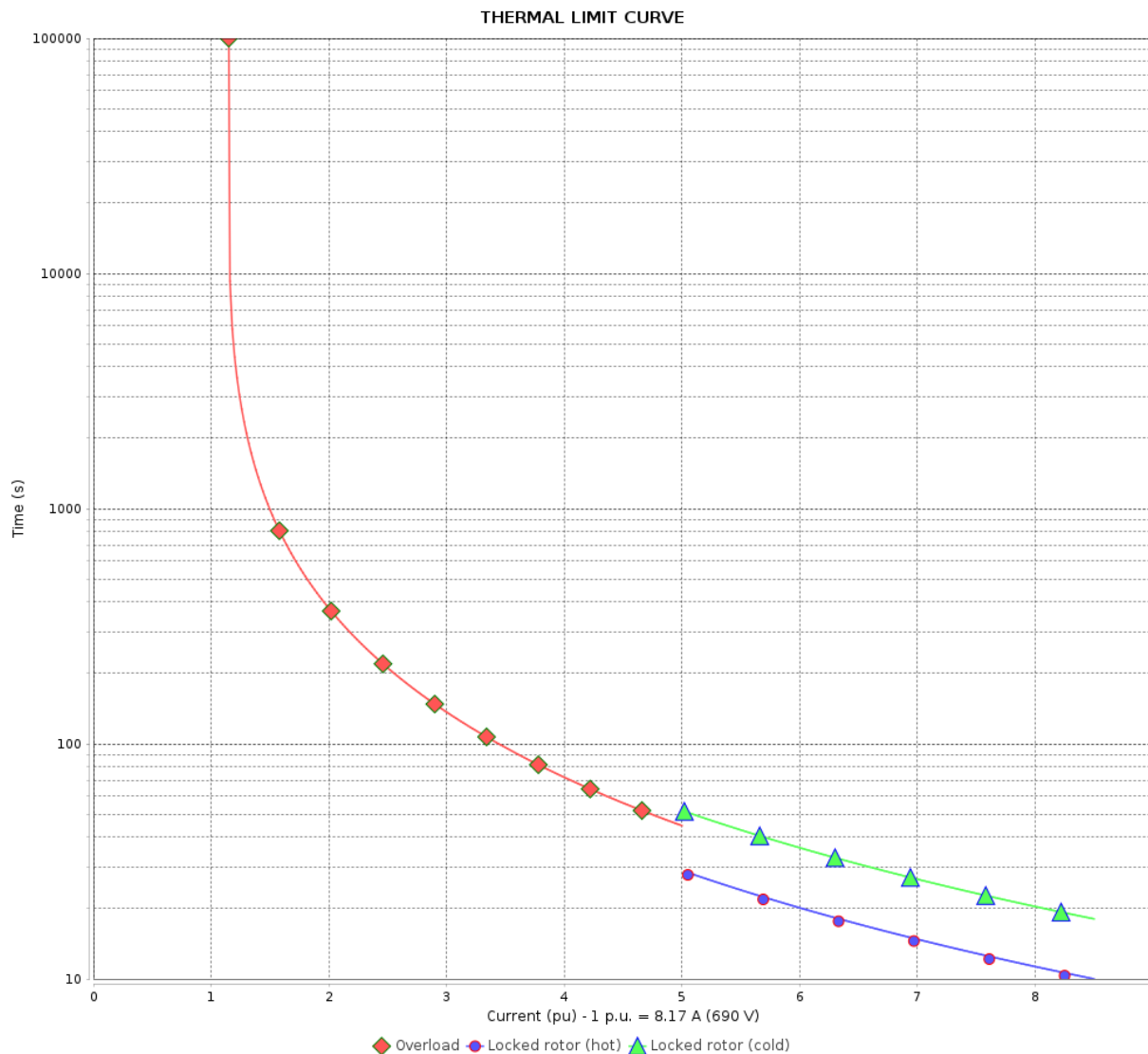
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Performance : 400/690 V 50 Hz 2P

Rated current : 14.1/8.17 A  
 LRC : 8.5  
 Rated torque : 2.50 kgfm  
 Locked rotor torque : 280 %  
 Breakdown torque : 330 %  
 Rated speed : 2925 rpm

Moment of inertia (J) : 0.0234 kgm<sup>2</sup>  
 Duty cycle : S1  
 Insulation class : F  
 Service factor : 1.00  
 Temperature rise : 80 K  
 Design : N

Heating constant  
 Cooling constant

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# THERMAL LIMIT CURVE

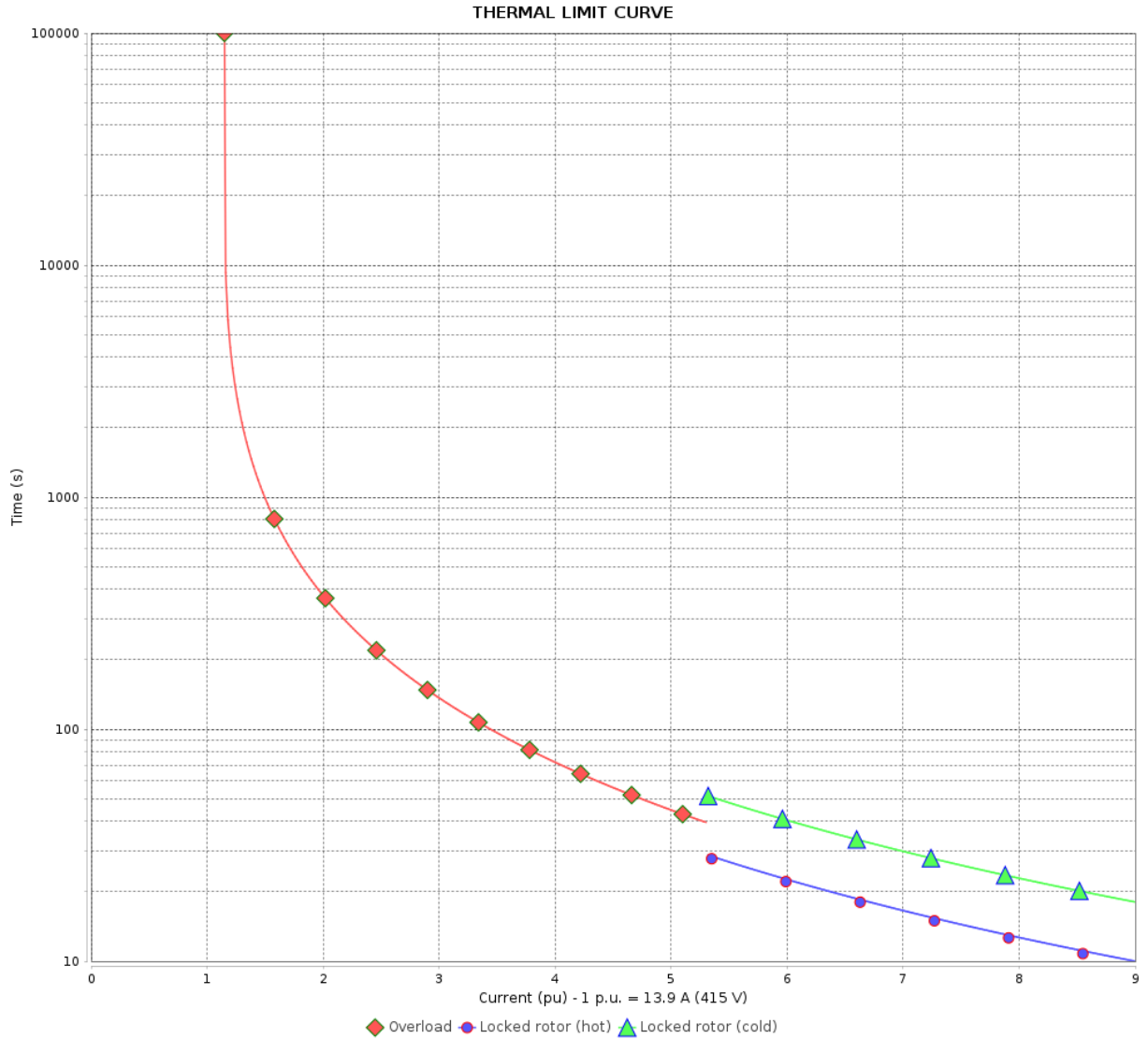
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LRC	: 9.0	Duty cycle	: S1
Rated torque	: 2.49 kgfm	Insulation class	: F
Locked rotor torque	: 300 %	Service factor	: 1.00
Breakdown torque	: 350 %	Temperature rise	: 80 K
Rated speed	: 2930 rpm	Design	: N

Heating constant

Cooling constant

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# THERMAL LIMIT CURVE

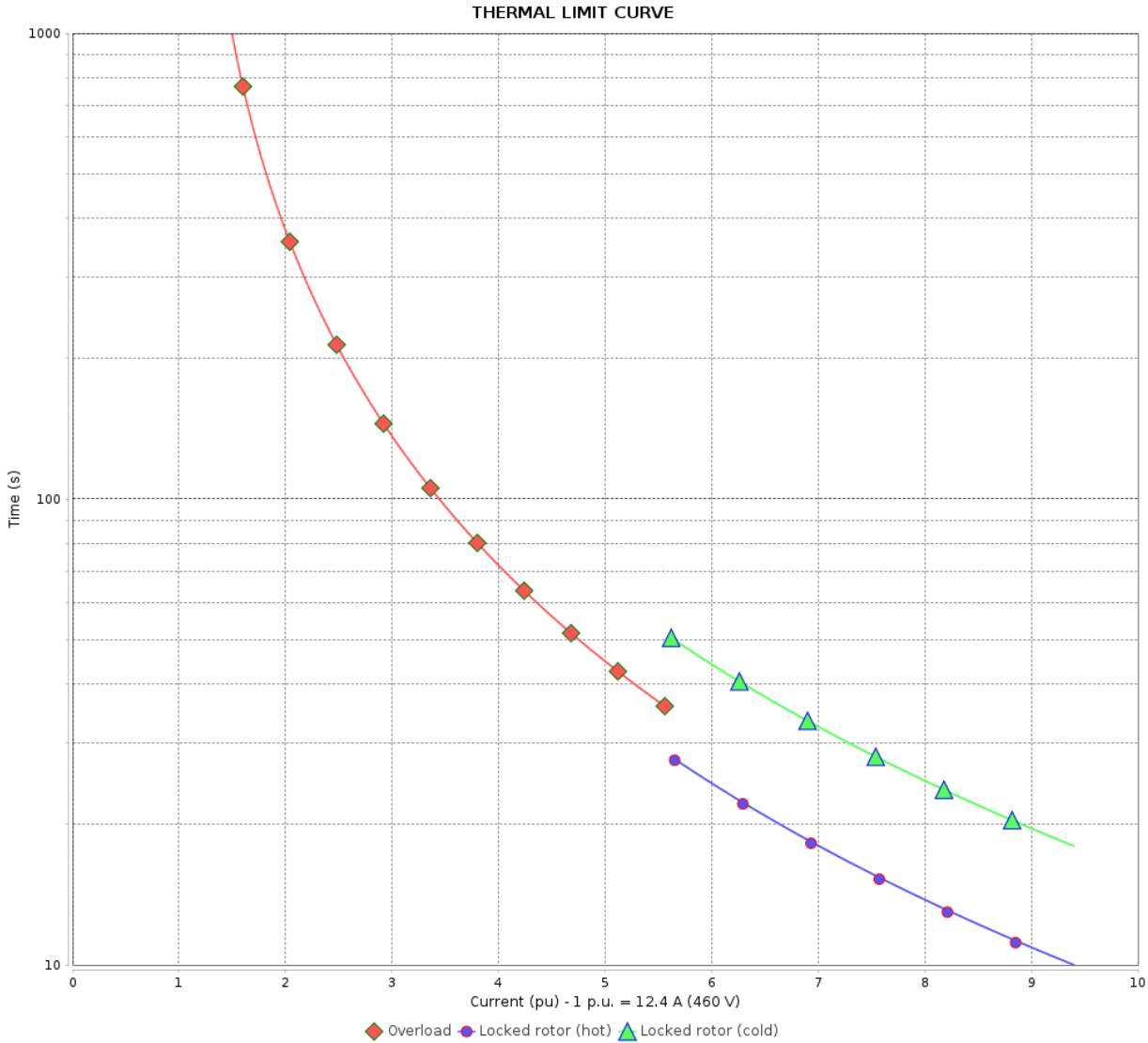
Three Phase Induction Motor - Squirrel Cage



Customer : Astraprom d.o.o.

Product line : IE3 Three-Phase

Product code : 12868138



Performance : 460 V 60 Hz 2P

Rated current	: 12.4 A	Moment of inertia (J)	: 0.0234 kgm <sup>2</sup>
LRC	: 9.4	Duty cycle	: S1
Rated torque	: 2.07 kgfm	Insulation class	: F
Locked rotor torque	: 310 %	Service factor	: 1.00
Breakdown torque	: 370 %	Temperature rise	: 80 K
Rated speed	: 3535 rpm	Design	: N

Heating constant

Cooling constant

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# VFD OPERATION CURVE

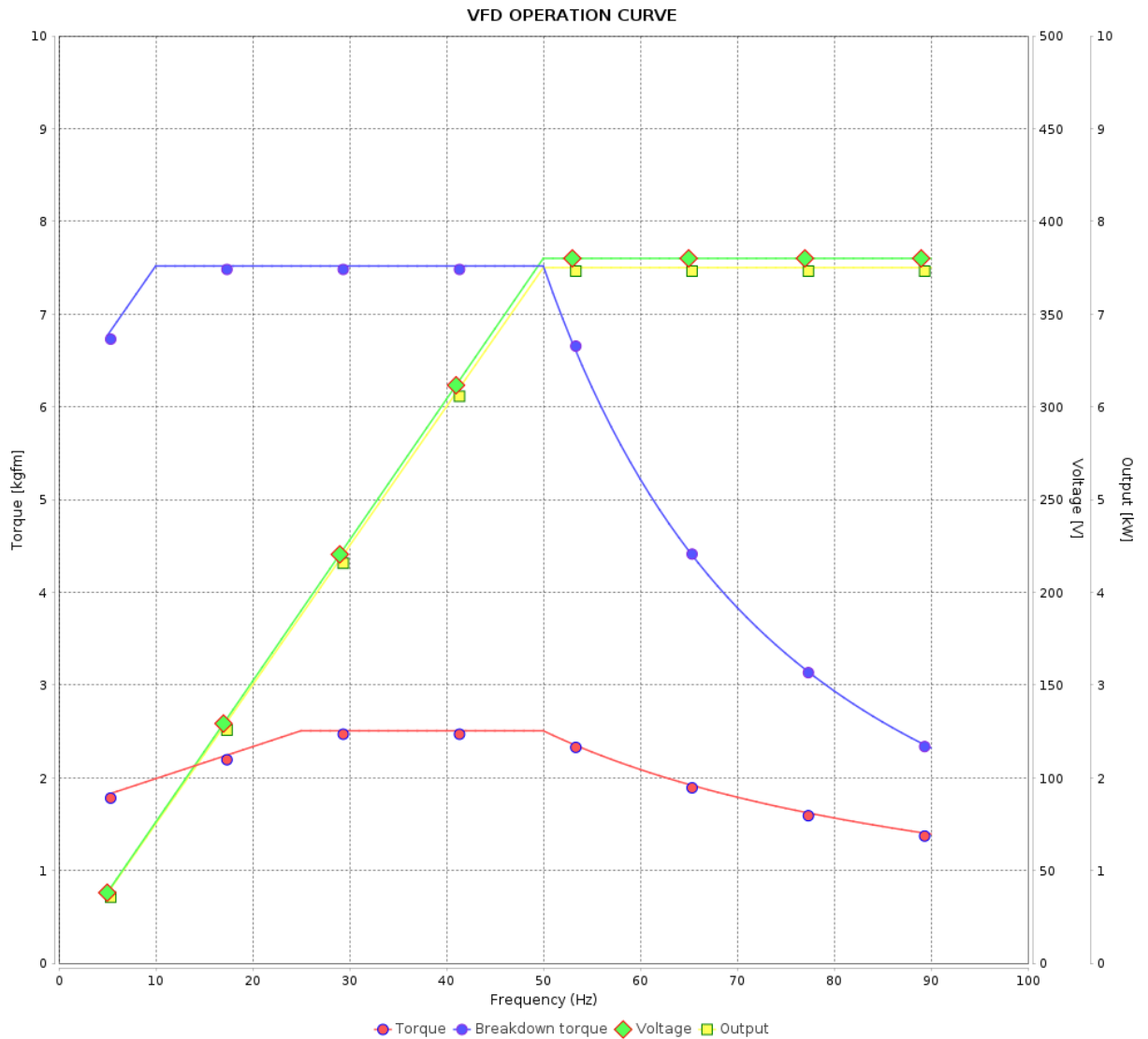
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 Locked rotor torque : 240 %  
 Breakdown torque : 300 %  
 Rated speed : 2915 rpm

Moment of inertia (J) : 0.0234 kgm<sup>2</sup>  
 Duty cycle : S1  
 Insulation class : F  
 Service factor : 1.00  
 Temperature rise : 80 K  
 Design : N

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# VFD OPERATION CURVE

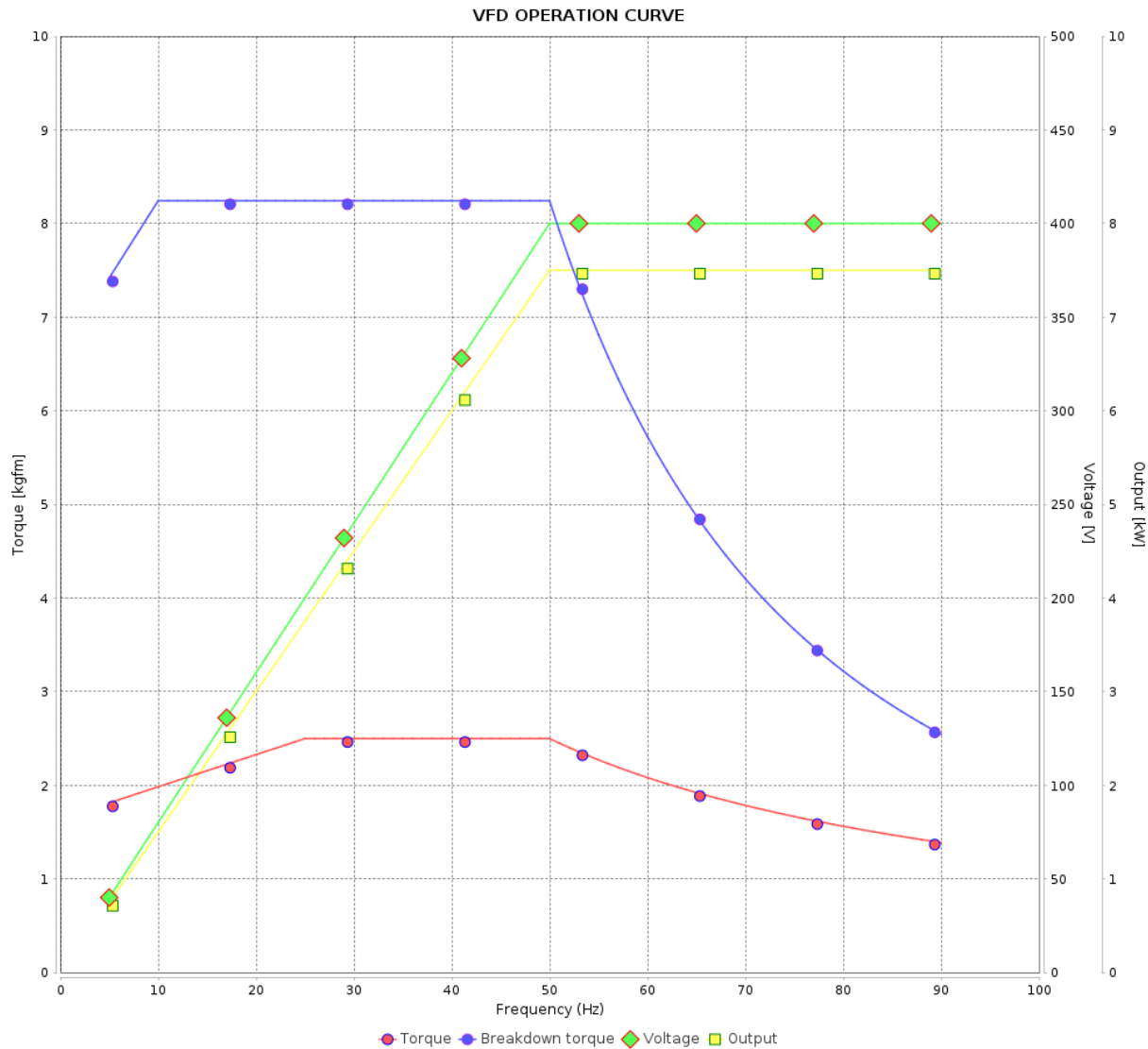
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Performance : 400/690 V 50 Hz 2P

Rated current : 14.1/8.17 A  
 LRC : 8.5  
 Rated torque : 2.50 kgfm  
 Locked rotor torque : 280 %  
 Breakdown torque : 330 %  
 Rated speed : 2925 rpm

Moment of inertia (J) : 0.0234 kgm<sup>2</sup>  
 Duty cycle : S1  
 Insulation class : F  
 Service factor : 1.00  
 Temperature rise : 80 K  
 Design : N

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# VFD OPERATION CURVE

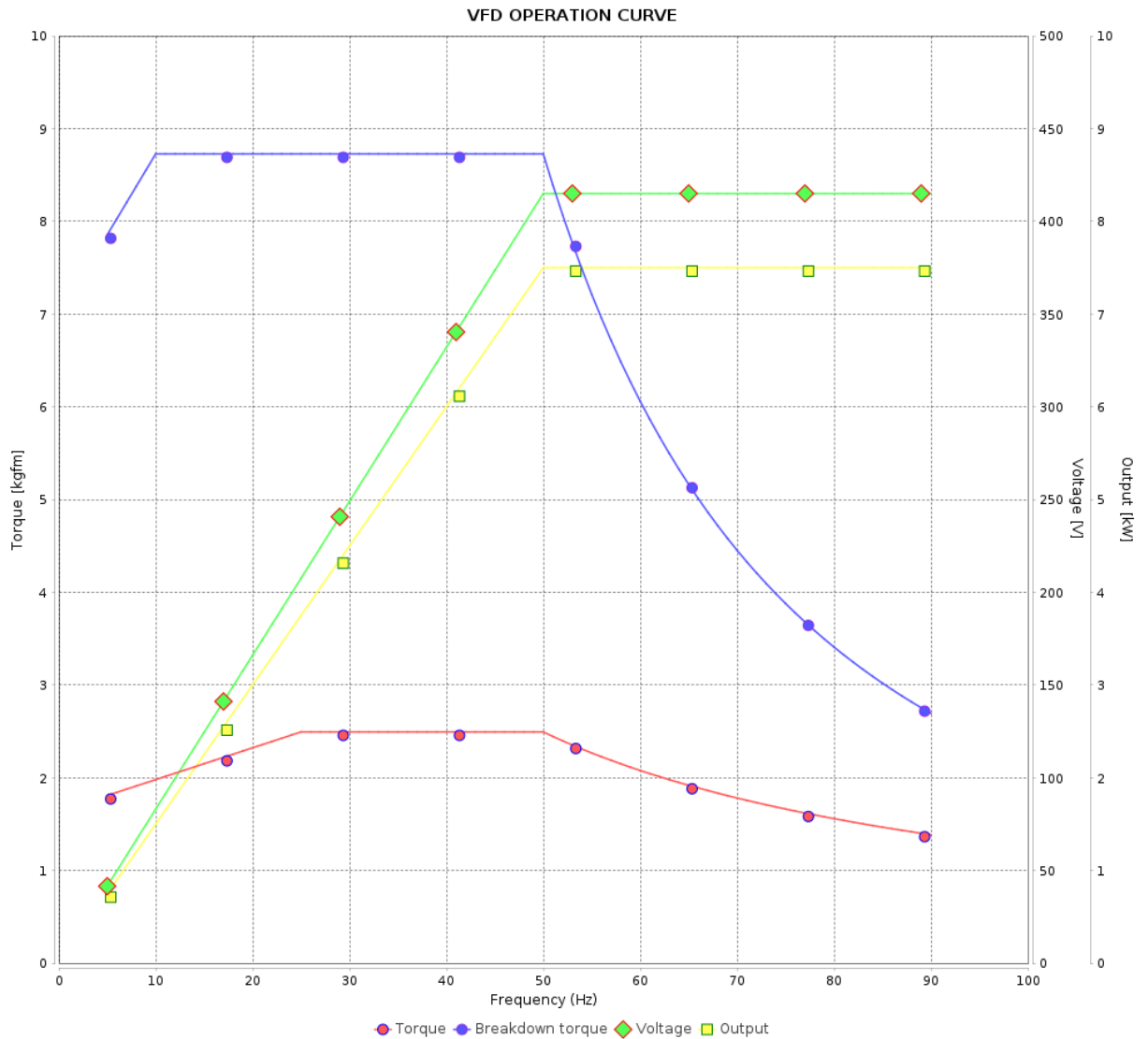
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Performance : 415 V 50 Hz 2P

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LRC	: 9.0	Duty cycle	: S1
Rated torque	: 2.49 kgfm	Insulation class	: F
Locked rotor torque	: 300 %	Service factor	: 1.00
Breakdown torque	: 350 %	Temperature rise	: 80 K
Rated speed	: 2930 rpm	Design	: N

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# VFD OPERATION CURVE

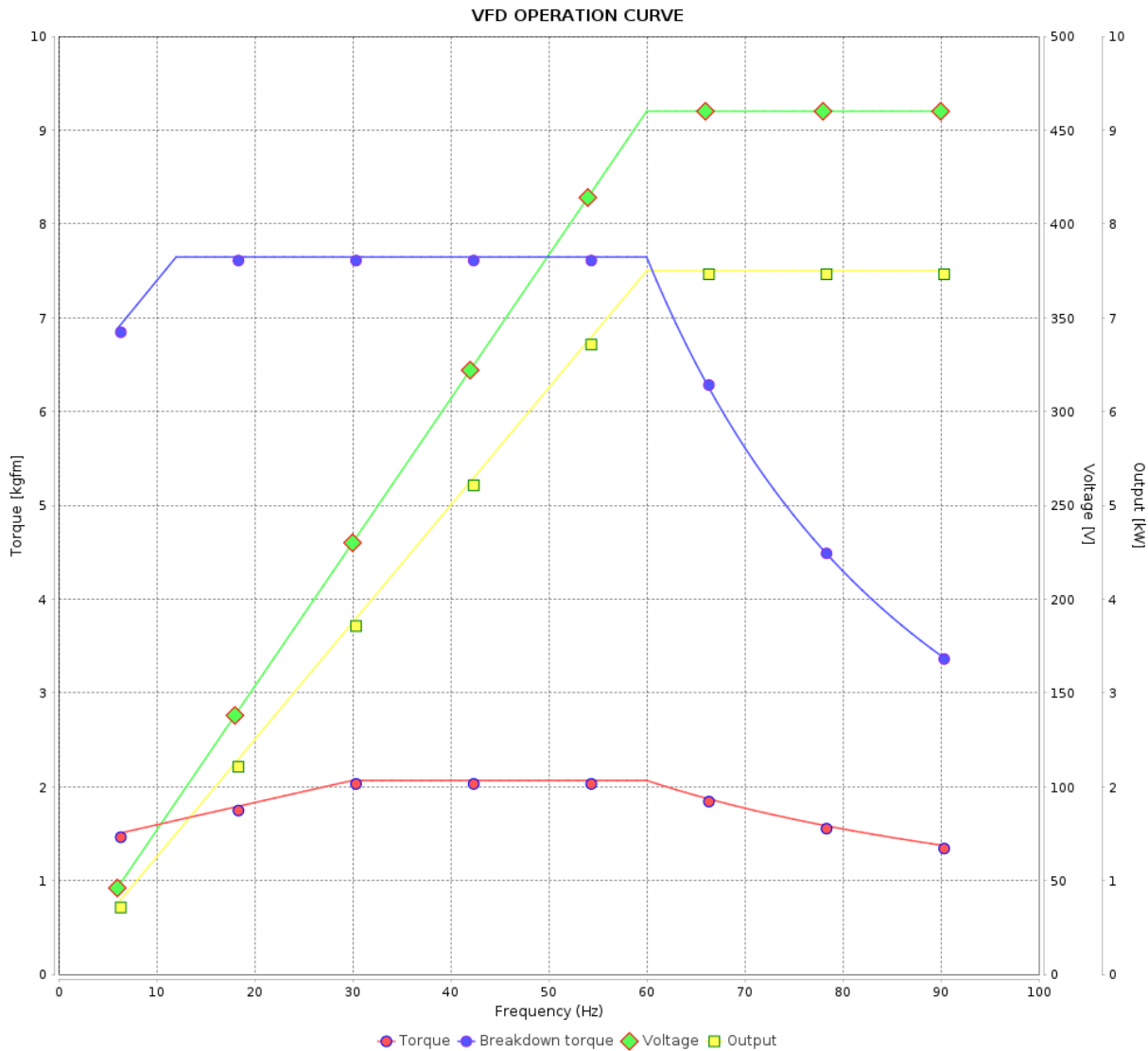
Three Phase Induction Motor - Squirrel Cage



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Performance : 460 V 60 Hz 2P

Rated current	: 12.4 A	Moment of inertia (J)	: 0.0234 kgm <sup>2</sup>
LRC	: 9.4	Duty cycle	: S1
Rated torque	: 2.07 kgfm	Insulation class	: F
Locked rotor torque	: 310 %	Service factor	: 1.00
Breakdown torque	: 370 %	Temperature rise	: 80 K
Rated speed	: 3535 rpm	Design	: N

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